

JOINT TACTICAL RADIO SYSTEM

The Joint Tactical Radio System (JTRS) is the Defense Department's transformational radio program. JTRS is a part of the Transformational Communication Architecture (TCA) and the Global Information Grid (GIG). This future architecture is DoD's vision for communications in a net-centric environment. The JTRS supports joint operations by providing the capability to transmit and receive a variety of waveforms and networking protocols used within the radio-frequency spectrum. JTRS ensures joint operational capabilities by providing voice, video, and data services to military commanders at all echelons of the force.

The operational concepts of *Joint Vision 2020*, coupled with the Marine Corps operating concept of *Expeditionary Maneuver Warfare*, place a premium on information superiority as an enabler. To that end, the JTRS will provide the warfighters with vertical and horizontal network connectivity across the radio-frequency spectrum, permitting them to achieve the information dominance that is critical to future warfare requirements.

JTRS is a family of affordable, high-capacity, software-defined tactical radios that provide wireless, mobile, line-of-sight and beyond-line-of-sight C4I capabilities to our warfighters. The JTRS family of radios will be interoperable with legacy communication systems and capable of growth to accommodate new requirements and tech-

nologies. Relying on open-system standards, it will also be compliant with the Joint Technical Architecture and will be employed in all domains (i.e. ground mobile, airborne, maritime). Additionally, JTRS will feature a Wideband Networking Waveform that will provide reliable wideband data transmission throughout the MAGTF.

The JTRS capabilities are segmented into form-fit-function domains. JTRS Cluster 1 includes requirements for Marine and Army ground vehicles, Air Force Tactical Air Control Parties, and Army rotary-wing aviation. Cluster 1 JTRS is being developed by the Army. Cluster 2 is a limited AN/PRC-148 handheld radio spiral development effort led by USSOCOM. The Navy is leading the Cluster 3 maritime-fixed terminal development. Cluster 4, led by the Air Force, will provide Air Force and Naval Aviation radios for rotary- and fixed-wing aircraft. The Army is the lead in the newly approved Cluster 5 and is developing dismounted terminals – handheld, man-portable, and small-form fit. Future Cluster objectives will address satellite communications.

JTRS is the wireless “foundation” supporting the GIG architecture, which is essential for network-centric warfighting. JTRS will help bring the Marine Corps' core competencies of readiness, deployability, flexibility, and innovation to joint, inter-agency, and coalition operations.